

Amendments to the Claims

The following listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims

1. - 51. (Canceled)

52. (New) An optical device for viewing an object comprising:

an imaging system having a wide viewing angle and designed to form an image of said object

at an image plane;

a telescopic system having a narrow viewing angle and designed to enable viewing of said image of the object; and

a slender tube having a distal end and a proximal end;

said imaging system and said image plane being disposed at said distal end of the slender tube, and at least one lens of the telescopic system being disposed between said imaging system and said proximal end of the slender tube;

said slender tube further comprising:

transparent optical media having a refraction index greater than 1, substantially filling a space between said imaging system and said lens and/or between said lens and the proximal end of the slender tube.

53. (New) An optical device according to Claim 52, wherein said image plane is disposed distally to the optical media.

54. (New) An optical device according to Claim 52, wherein said transparent media is designed in the form of at least one transparent rod.

55. (New) An optical device according to Claim 54, wherein said transparent rod has a distal end formed as a lens.

56. (New) An optical device according to Claim 55, wherein said distal end of the transparent rod is designed to perform the function of said lens of said telescopic system disposed between said imaging system and said proximal end of the slender tube.

57. (New) An optical device according to Claim 52, wherein said viewing angle of the imaging system is so wide and, consequently, its focal length is so short that said location of the image plane lies within the depth of field of the telescopic system over the entire range of working distances of the optical device.

58. (New) An optical device according to Claim 52, wherein the device is designed to be completely disposable.

59. (New) An optical device according to Claim 52, further comprising:

a reusable section including at least a part of said telescopic system; and
a disposable section in the form of said tube detachably mountable to said reusable section.

60. (New) An optical device according to Claim 52, wherein the device is an endoscope.

61. (New) An optical device according to Claim 52, wherein the device is a borescope.

62. (New) An optical device according to Claim 52, further including an illumination light guide designed to coaxially and contiguously adjoin said slender tube.

63. (New) An optical device according to Claim 62, wherein said light guide is composed of fiber optic strands.

64. (New) An optical device according to Claim 62, wherein said light guide is an annular cylinder.

65. (New) An optical device according to Claim 64, wherein said annular cylinder has an extremity processed to have a design adapted to direct the light projected therefrom in a desired intensity distribution suited to the viewing angle of the imaging system.

66. (New) An optical device according to Claim 65, further including a light guide element adapted to conduct light from a light source to the cylinder, the element being designed to match the cylinder at one end and to match the light source at the other end so as to reduce loss of light.

67. (New) An optical device according to Claim 52, further including one or more LEDs connected or connectable to an external power supply source or an internal battery.

68. (New) An optical device according to Claim 67, wherein said LEDs are placed at the distal end of the endoscope.

69. (New) An optical device according to Claim 67, wherein said LEDs are placed at the proximal end of the endoscope, in particular, at the end of its viewing portion.

70. (New) An optical device according to Claim 54, wherein the telescopic system comprises:

 a first converging lens and a second converging lens;
 said transparent media being in the form of two transparent rods; and
 said first converging lens being disposed between said two rods.

71. (New) An optical device according to Claim 52, further comprising:

 a housing, said proximal end of the slender tube being mounted within said housing so that a part of said telescopic system is disposed within said housing.

72. (New) A slender tube for use in an optical device for viewing an object, the optical device comprising:

 a housing;
 an imaging system having a wide viewing angle and designed to form an image of said object at an image plane;
 a telescopic system having a narrow viewing angle and designed to enable viewing of said image of the object;

said slender tube having a distal and a proximal end mountable within said housing so that a part of said telescopic system is disposed within said housing;

the slender tube comprising:

 said imaging system located, together with said image plane, at the said distal end;
 a lens constituting a part of said telescopic system and disposed between said imaging system and said proximal end of the slender tube; and
 a transparent optical media having a refraction index greater than 1, substantially filling a space between said imaging system and said lens and/or between said lens and the proximal end of the slender tube.

73. (New) An optical device according to Claim 72, wherein said image plane is disposed distally to the optical media.

74. (New) An optical device according to Claim 72, wherein said transparent media is designed in the form of at least one transparent rod.

75. (New) An optical device according to Claim 74, wherein said transparent rod has a distal end formed as a lens.

76. (New) An optical device according to Claim 74, wherein said distal end of the transparent rod is designed to perform the function of said lens of said telescopic system disposed between said imaging system and said proximal end of the slender tube.

77. (New) An optical device according to Claim 72, wherein the telescopic system comprises:

a first converging lens and a second converging lens;
the transparent media being in the form of two transparent rods; and
said first converging lens being disposed between said two rods.